

Assignment

Instructions:

- Build an application using React.js.
- The application should be able to create, display, update, delete Scenario and Vehicle, a scenario can have multiple vehicles, and vehicles should be able move when user click a button based on the scenario and vehicles parameters.
- The **scenario** should have following fields:
 - Scenario id
 - Scenario name
 - Time
- The **Vehicle** should have following fields:
 - Vehicle id
 - Vehicle name
 - Initial Position X
 - Initial Position Y
 - Speed
 - Direction (can have only Towards, Backwards, Upwards and Downwards).
- For storing data use node server.
- Create your own node server for GET,PUT,POST,DELETE request accordingly.
- store the data in json file which will be created at the node sever.
- Whenever you required that data you will read the json via node server and when the frontend will make api request of GET,PUT,POST,DELETE then the server should respond respectively.
- You have to create sidebar like displayed in the below images.
- The interface should be created to similar to that and these interface will make request to your node server.
- Inside **Home page** user can be able to select the scenario whichever scenarios he has created and start simulation, when user click **start simulation** vehicles should start moving based on the direction and speed, till the scenario time, if the vehicles is going outside the container then vehicles should hide.
- While adding the Vehicle do proper validation like user should not be able to add the positions greater than the Home page's graph container size.
- After Completion of this project you have to **deploy** the application to any platform (such as vercel, netlify etc) and upload code to your github account's public repository, and write a proper **README.MD** file explaining how to install your project and how to run your application along with the json-server and brief explanation about the project.

Scenario / add

Add Scenario

Scenario Name
Test Scenario

Scenario Time (seconds)
10

Scenario is required

Add Reset Go Back

Figure 1: Add Scenario Page

Home
Add Scenario
All Scenarios
Add Vehicle

All Scenarios

New Scenario Add Vehicle Delete All

Scenario Id	Scenario Name	Scenario Time	Number of Vehicles	Add Vehicle	Edit	Delete
1	Test Scenario	2s	1	+		
2	My Scenario	10s	3	+		
3	Scenario ABC	12s	0	+		

Figure 2: All Scenarios Page

Vehicle / add

Add Vehicle

Scenarios List
Select Scenario

Vehicle Name
Target abc

Speed
2

Position X
1000
Position X should not be > 800 and < 0

Position Y
20

Direction
Select Direction
Towards
Backwards
Upwards
Downwards

Add Reset Go Back

Figure 3: Add Vehicle Page

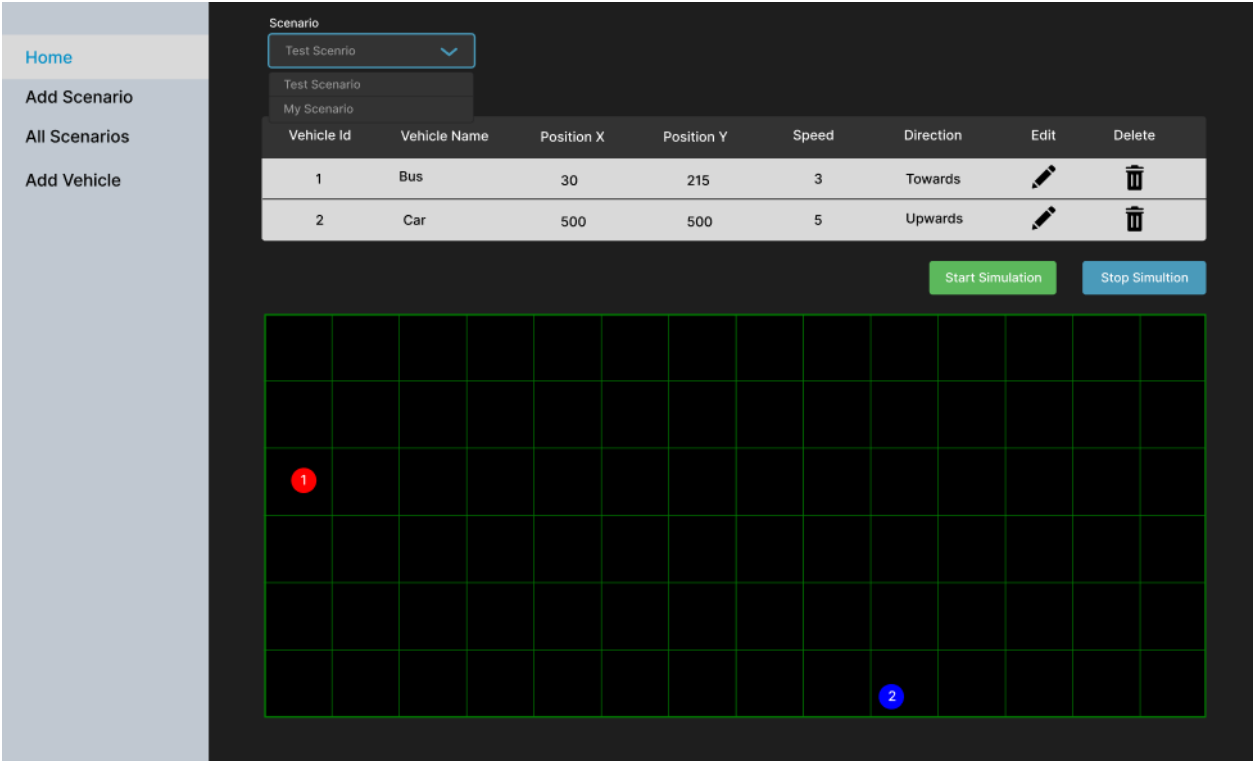


Figure 4: Home Page